

Worksheet 9.2: Areas of Parallelograms, Triangles, and Rhombuses

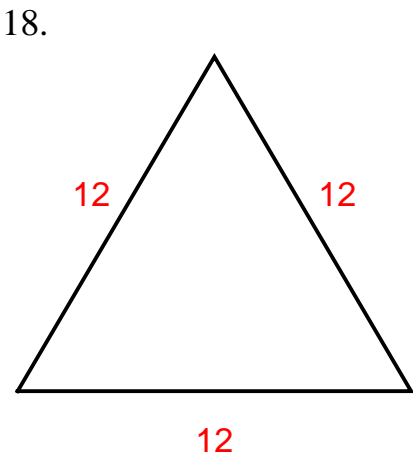
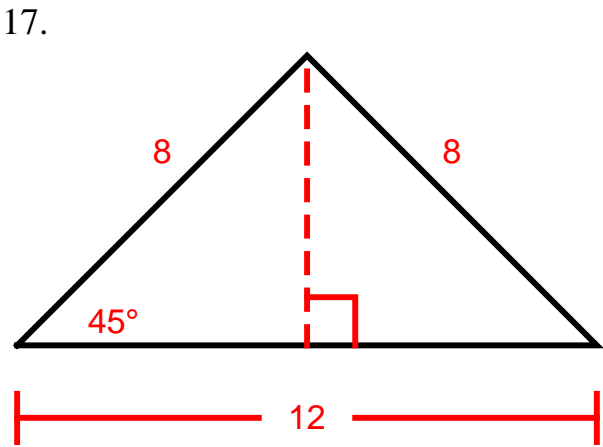
Exercises 1- 8 refer to triangles. Complete the table below.

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. |
|---|----|------|----|----|-------------|-------------|------|--------------|
| b | 10 | 6.8 | 30 | | $5\sqrt{2}$ | $4\sqrt{3}$ | 5k | |
| h | 8 | 12.7 | | 12 | $3\sqrt{2}$ | $5\sqrt{6}$ | | $4\sqrt{2}$ |
| A | | | 96 | 42 | | | 30km | $36\sqrt{2}$ |

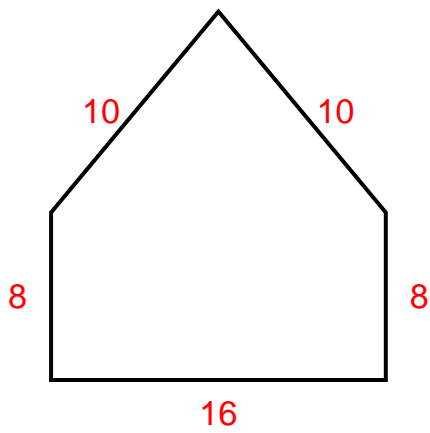
Exercises 9 - 16 refer to parallelograms. Complete the table below.

| | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. |
|---|----|------|-----|-------------|-------------|-------------|------|--------------|
| b | 12 | 16.4 | 36 | | $5\sqrt{6}$ | $6\sqrt{3}$ | 10x | |
| h | 18 | 10.6 | | $2\sqrt{3}$ | $3\sqrt{4}$ | $2\sqrt{6}$ | | $8\sqrt{2}$ |
| A | | | 144 | 48 | | | 40xy | $96\sqrt{2}$ |

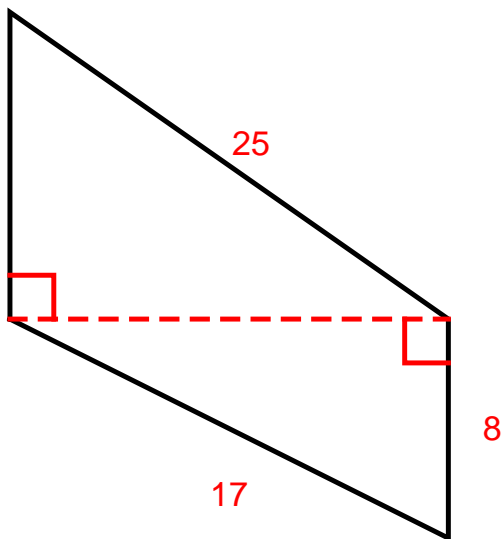
Find the area of each figure below.



19.



20.



21. A parallelogram has sides 12 cm and 20 cm long. If the shorter altitude is 6 cm long, how long is the other altitude?

22. Find the area of a rhombus with perimeter 80 and diagonal 12.

23. Find the area of an equilateral triangle with height 6.

24. Find the area of a 30° - 60° - 90° triangle with hypotenuse 12.

25. A rhombus has area 84 and one diagonal of length 12. Find the length of the other diagonal.

26. The area of an equilateral triangle with side length s can be found using the formula $A = \frac{s^2 \sqrt{3}}{4}$. Show why this works with a diagram.